

## **What is claimed is:**

**[Claim 1]** A target selection system for a vehicle comprising:

at least one object detection sensor generating object detection signals associated with a plurality of objects;

a feature target selection module selecting secondary targets from said plurality of objects and associating said secondary targets with a plurality of respective features; and

a primary target selection module selecting primary targets from said secondary targets and associating each of said primary targets with a single respective concentrated feature.

**[Claim 2]** A system as in claim 1 wherein said single respective concentrated feature is selected from said plurality of respective features.

**[Claim 3]** A system as in claim 1 further comprising:

a path prediction module determining at least one predicted path estimation of said vehicle; and

a diagnostic module determining positions of said plurality of objects in response to said at least one predicted path estimation;

said feature target selection module selecting said secondary targets in response to said determined positions.

**[Claim 4]** A system as in claim 3 wherein said path prediction module determines a resultant predicted future path and an associated path confidence level in response to said at least one predicted path estimation and said diagnostic module, and determining said positions in response to said predicted future path and said confidence level.

**[Claim 5]** A system as in claim 1 further comprising an object tracker module tracking said plurality of objects and generating an object data field, said feature target selection module selecting said secondary targets in response to said object data field.

**[Claim 6]** A system as in claim 5 wherein said said object tracker module tags at least one of said plurality of objects as new and tracks previously detected objects.

**[Claim 7]** A system as in claim 5 wherein said object data field comprises:

an object list; and

object associated characteristic data.

**[Claim 8]** A system as in claim 7 wherein said object associated characteristic data comprises data selected from at least one of range, range-rate, angle, position, shape, size, weight, classification, certainty indices, and confidence levels.

**[Claim 9]** A system as in claim 1 further comprising a cue information request module generating target information request signals, said at least one object detection sensor generating said object detection signals in response to said target information request signals.

**[Claim 10]** A system as in claim 9 wherein said cue information request module generates a first information request signal associated with a first primary target and a second information request signal associated with a second primary target.

**[Claim 11]** A system as in claim 9 wherein said at least one object detection sensor adjusts sensor settings in response to said target information request signals.

**[Claim 12]** A system as in claim 9 wherein said cue information request module generates a first information request signal associated with a first secondary target and a second information request signal associated with a second secondary target.

**[Claim 13]** A system as in claim 1 wherein said feature target selection module selects a first set of secondary targets associated with a first feature and a second set of secondary targets associated with a second feature.

**[Claim 14]** A system as in claim 1 wherein said primary target selection module selects a first primary target associated solely with a first feature and a secondary target associated solely with a second feature.

**[Claim 15]** A system as in claim 1 wherein said primary target selection module selects a set of primary targets associated with a particular feature.

**[Claim 16]** A countermeasure system for a vehicle comprising:

at least one object detection sensor generating object detection signals associated with a plurality of objects;

a feature target selection module selecting secondary targets from said plurality of objects and associating said secondary targets with a plurality of respective features;

a primary target selection module selecting primary targets from said secondary targets and associating each of said primary targets with a single respective concentrated feature; and

a controller performing at least one countermeasure in response to said primary targets.

**[Claim 17]** A system as in claim 16 further comprising:

a path prediction module determining a resultant predicted future path of the vehicle and an associated path confidence level; and

a diagnostic module determining positions of said plurality of objects in response to said resultant predicted future path and said path confidence level;

said feature target selection module selecting said secondary targets in response to said determined positions.

**[Claim 18]** A target selection system for a vehicle comprising:

at least one object detection sensor generating object detection signals associated with a plurality of objects;  
a plurality of vehicle state sensors generating vehicle state signals;  
a path-tracking module generating a path-tracking signal;  
a path prediction module generating at least one path-prediction signal in response to said vehicle state signals, said path prediction module determining a resultant predicted future path of the vehicle and an associated path confidence level in response to said at least one path prediction signal and said path tracking signal;  
a controller determining threat of each of said plurality of objects in response to said object detection signals and selecting at least one primary target for a plurality of features in response to said resultant predicted future path, said associated confidence level, and said threat.

**[Claim 19]** A system as in claim 18 wherein said controller in selecting said at least one primary target determines a highest threat object of said plurality of objects for said plurality of features, said controller performing a countermeasure in response to said primary target.

**[Claim 20]** A system as in claim 18 wherein said controller comprises:

a feature target selection module selecting secondary targets from said plurality of objects and associating said secondary targets with said plurality of features; and  
a primary target selection module selecting said at least one primary target from said secondary targets and associating each of a plurality of concentrated features with said at least one primary target.